

**DETECTION DEVICES, METHODS AND SYSTEMS
FOR GAS PHASE MATERIALS**

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Abstract of the Invention

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Sensor arrays, methods, and systems for detecting the presence of gas phase materials by the formation of films based on the gas phase material are disclosed. The gas phase materials preferentially deposit conductive films on receptor materials that can be detected. The invention may also provide for increased sensitivity to the deposition of conductive materials through the use of closely spaced conductive electrodes interconnected by lines of receptor material. Examples of gas phase materials that may be detected include RuO_4 , IrO_4 and RhO_4 .

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